



Lipid Screening in Children and Adolescents



When your child needs a hospital, everything matters.SM

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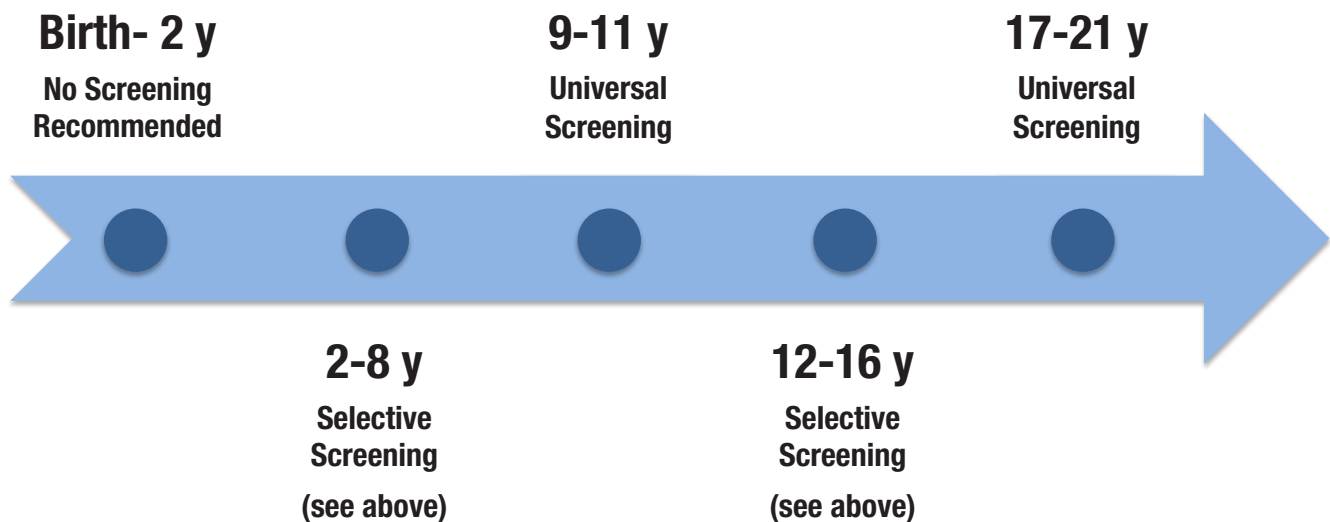
Ischemic cardiovascular disease (CVD), including coronary heart disease and stroke, is characterized by reduced blood flow to the heart. It is the most common cause of mortality in the world. With rising rates of obesity, type 2 diabetes, atherosclerosis and other known risk factors for CVD, it is increasingly important to identify at-risk populations to prevent the development of future CVD events with effective management.

In 2011, the National Heart, Lung, and Blood Institute (NHLBI) Expert Panel published updated guidelines for cardiovascular health and CVD risk reduction in youth. One of the main points of these guidelines is the strong recommendation for universal lipid screening for patients who are between 9 and 11 years of age and a second universal screening is performed between 17 and 21 years of age. This screening can help find youth with genetic causes for dyslipidemia and identify those with increased cardiovascular risk factors.

However, targeted (selective) screening should be done starting at age 2 years old if the patient has established risk factors, including:

- Parent with known dyslipidemia
- Family history of early CVD
- Hypertension
- Obesity
- Tobacco use
- Diabetes (type 1 and type 2)
- Kidney disease
- Heart transplant
- Kawasaki disease
- Chronic inflammatory disease
- HIV
- Nephrotic syndrome

Screening Recommendations

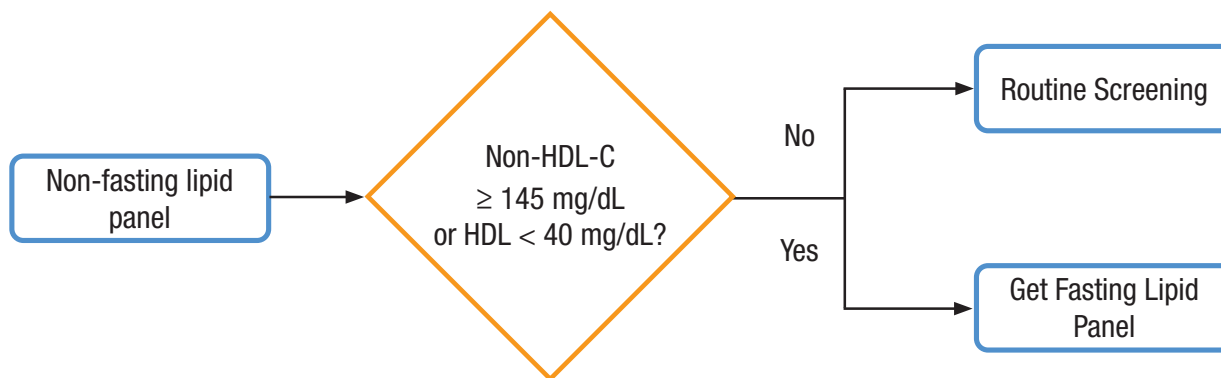


Adapted from Pediatrics. 2011;128 Suppl:S213-56.

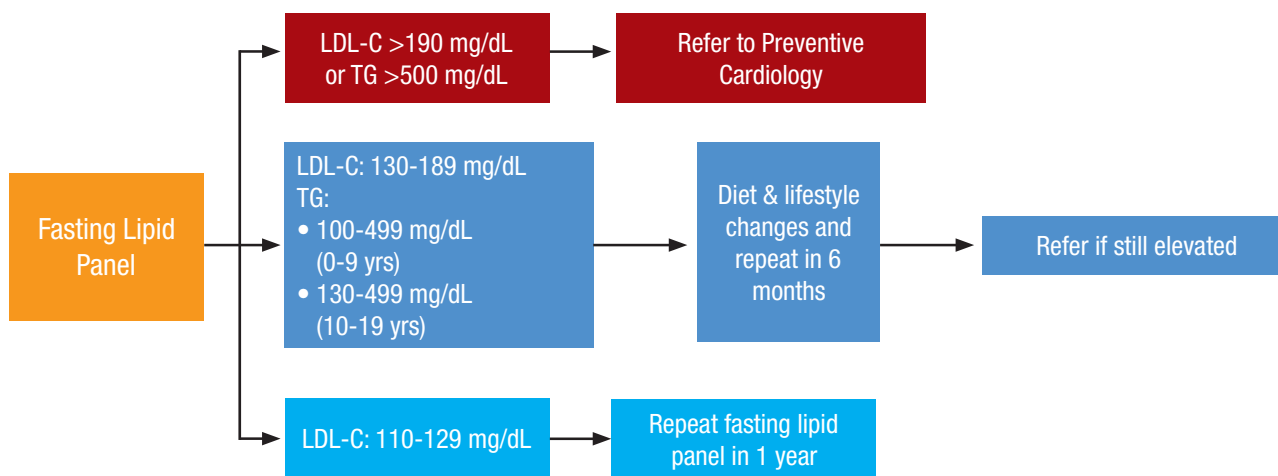
Interpreting Lipid Values

Nonfasting and fasting lipid panels are used to measure the amount of LDL-C, HDL-C and total cholesterol in the blood. Nonfasting panels are typically used for universal screening because the patient does not have to do any preparation for the test. However, if the nonfasting panel is abnormal or borderline, a fasting lipid panel should be done for more accurate assessment.

Use the figure below to decide if a fasting lipid panel should be obtained.



What to do with fasting lipid panel results.



When to Refer to a Pediatric Cardiologist*

If you have concerns about your patient's abnormal fasting lab results, please place a referral and our team can review and help guide the referral process. If non-fasting lab results are abnormal, the referring physician should order a fasting lipid panel before the specialist visit. Urgent referrals are recommended for LDL-C greater than 190mg/dL and triglycerides greater than 500mg/dL.

Family Guide to Diet and Exercise Recommendations

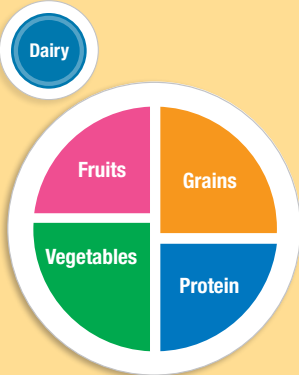
The following recommendations are good for everyone but are of particular importance for people who are at risk for cardiovascular disease. Making healthy choices now is the foundation for a healthy heart into adulthood.

Exercise guidelines: Exercise 60 min everyday divided among aerobic, bone loading and muscle strengthening physical activity. If currently inactive, start with 10 min/day or 10 min most days and add an additional 5 min every week or every 2 weeks, depending on your ability. It is important to work with your physician on an exercise plan that is accessible and safe.

Nutrition guidelines: Follow MyPlate recommendations. More information about MyPlate is available at ChooseMyPlate.gov.

Below are some suggestions to target LDL-C and Triglycerides specifically.

LDL-C	Triglycerides
Reduce fatty, greasy, fried foods Choose chicken or fish over beef Choose skim/1% milk, nonfat yogurt, low-fat cheese instead of regular cheese	Choose sugar-free beverages Choose whole wheat bread/pasta or brown rice instead of white Reduce chips, fried foods, simple carb snack foods Reduce potato products
Physical Activity Goal for children & adolescents: 60 minutes daily	



- For meal times, divide the plate as follows: ½ plate fruits and non-starchy vegetables, ¼ plate lean protein, ¼ plate whole grains or starchy vegetables, and low-fat dairy.
- Drink water, low-fat dairy (1 percent or skim milk) and sugar-free beverages.
- Do not skip meals.
- Eat a healthy breakfast every day.
- Limit intake of sugary or fatty foods
- Limit intake of sugary beverages to 4-6 oz per day (juice, regular soda pop, fruit-flavored drinks, lemonade, sports drinks and sweetened tea).

Source: ChooseMyPlate.gov

Referrals and Consultations

Online: [NationwideChildrens.org/Heart](https://www.nationwidechildrens.org/Heart)
Phone: (614) 722-0494
Physician Direct Connect Line for 24-hour urgent physician consultations:
(614) 355-0221 or (877) 355-0221

Laboratory Testing and Pathology Consultations

Online: [NationwideChildrens.org/Lab](https://www.nationwidechildrens.org/Lab)
Phone: (614) 722-5477 or (800) 934-7575

